CHAPTER 4

Regional Analyses of Restoration Planning

The regional analyses that comprise Chapter 4 provide a snapshot of the level of planning for coastal and estuarine habitat restoration within six regions of the United States. They also provide a glimpse into future needs and directions for restoration. The regional analyses provide an overview of the following:

- original acreage and acres lost, conserved or preserved, and restored;
- key habitats and species in need of restoration and/or protection such as wetlands, marsh, riparian areas, and the various species that depend on these habitats;
- key threats to habitats and species of concern such as subsidence and sea level rise, filling, draining and invasive species;
- common restoration goals in the areas of land-use management, protection of essential fish habitat and improvement of water quality;
- successful restoration methods and techniques such as restoring tidal flow and planting native vegetation;
- key elements of successful restoration efforts such as site selection criteria, reference sites, and adaptive management;
- types of restoration in need of further research and testing, including beach renourishment and beneficial use of dredge material; and
- areas where more research is needed (e.g., better understanding of ecosystem structure and function, and the potential causes and effects of habitat alterations) to better inform restoration planning and increase the likelihood of restoration success.

Analyses of estuarine habitat restoration plans have been developed for six regions within the United States.

- **Northeast Atlantic:** Maine, N.H., Mass., R.I., Conn., N.Y., N.J., Del., Md., Va.
- **Southeast Atlantic:** N.C., S.C., Ga., Fla. (including south Florida, the Everglades, Florida Bay and the Florida Keys), Puerto Rico, U.S. Virgin Islands
- **Gulf of Mexico:** The Gulf Coast of Florida (excluding the Everglades, Florida Bay and the Florida Keys), Miss., Ala., La., Tex.
- **California and the Pacific Islands:** Calif., Hawaii, Pacific Protectorates
- **Northwest Pacific:** Ore., Wash., Alaska
- **Great Lakes:** Minn., Mich., Wis., Ind., Ill., Ohio, N.Y.

The analyses are based on an inventory of planning efforts related to coastal and estuarine habitat restoration in each region. Emphasis has been placed on estuarine habitats and those coastal habitats that directly impact estuarine areas. The information provided in these analyses is not meant to be inclusive of all information related to estuarine and coastal habitat within these six regions. Rather, it provides a picture of the status of coastal and estuarine habitats based on information gathered primarily from restoration plans and common themes within those plans. If certain information on coastal and estuarine habitats or restoration within a region was not identified in any of the restoration plans inventoried, it is likely that it is not included in the regional analyses presented here.

The information gleaned from the review of restoration plans is also available in a searchable on-line database on A National Strategy web site (http://restoration.nos.noaa.gov). Information available includes basic plan data (including plan description, geographic information and contact information) as well as technical information (for example, plan goals, partnerships, public outreach and habitat information).

Several national restoration programs also were identified in the review of restoration efforts. The U.S. Department of Agriculture, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, and the U.S. Army Corps of Engineers each have several programs that focus specifically on restoration. A description of some of these programs can be found in Appendix A of *A National Strategy*.

In addition to restoration, protection, preservation, acquisition and enhancement also are important mechanisms for conserving habitat. Although these issues are not discussed in great detail in the regional analyses, they are critical to the success of restoration and often occur in conjunction with habitat restoration activities.

Many other habitats were not considered here because they were outside the scope of this analysis. However, the protection and restoration of these habitats in many cases benefit the estuaries downstream.